Advantages disadvantages for businesses implementing network convergence systems ...

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1. What are the advantages/disadvantages for businesses implementing network convergence systems?

Advantages

The biggest advantage is cost. In many buildings there is cabling, PBX equipment, telephones, equipment rooms, and staff to engineer, maintain, budget, plan, manage change, etc. , to support the voice infrastructure. Then there is cabling, routers, switches, computers, equipment rooms and staff to engineer, maintain, plan budgets, plan strategy, manage change, etc. , to support the data infrastructure. If these two environments, voice and data, could be provided over the same infrastructure, the savings would be immense. Moving voice and data services to a common network allows enterprises to access data faster. Another benefit is efficiency. Network convergence enables management of multiple protocols throughout the data center from a centralized management console. Network convergence fully complements virtualization initiatives and provides the foundation for a truly agile end-to-end infrastructure.

Disadvantages

One of the biggest disadvantages is that is creates a single point of failure. Take a sales company for instance. If the internet were to go down, they could still pick up the phone and make sales calls. Converged networks have the cumulative effect of introducing a new risk to data assets that did not exist in the old world of network stovepipes: a " monolithic point of failure".

This is distinct from a " single point of failure", which indicates a point in an application, system or process where a collapse impacts that particular application system or process.

A monolithic point of failure has impacts spreading far beyond a given application, system or process; everything is impacted: data, voice, remote monitoring, manufacturing, and access control. Formerly, one communications system may have been largely unaffected by a failure in another network; for example, the LAN drops so people pick up the phone. Under convergence, a monolithic failure results in the LAN dropping, the phones going dead and perhaps the doors lock and will only let people out – but not back into the office. Another disadvantage is Interdependency.

It can present a problem in one data asset and impact another asset in ways not addressable or predictable from a network management and design perspective. For instance, a surge in data volume from one asset (voice mail) causes another asset to slow down (real time process control monitoring) which causes a third application to start producing more data (CCTV, as operators try to see why the process control data is not available) and pushes the converged infrastructure to its limits.

Pick 2 Businesses or industry and describe in detail:

1. How Network Convergence can improve communication

2. Become a competitive advantage.

The Healthcare Industry

1. Network convergence can improve communication in the healthcare industry by allowing the patient to have access to the doctor wherever he or she is. Additional advantages include: easier installation of new patient care or facility management applications, optimal information flow between the facility's equipment and systems, better accessibility of information for mobile clinicians and caregivers and preventing duplication among existing communication infrastructures. The converged infrastructure provides an open foundation that can tie all the healthcare applications and systems together along one or more infrastructures

2. Competitive advantage in the healthcare industry relies on accessibility. With the convergence of healthcare information systems on the upswing, demand is growing for healthcare networks to incorporate internal communications systems, monitoring and control of clinical equipment, VOIP, fire and life safety systems, security systems, environmental control systems, and wireless and mobile communications.

A Hospital with a converged Infrastructure has the ability to stream video conferencing and training facilities, as well as telemedicine, which involves data-intensive applications such as remote consultations and digital image transfer of X-rays and other diagnostic imaging technologies.

The Education Industry

1. Network convergence can improve communication in the education industry by allowing the student greater access to the teacher. Organizations are reducing expenses by using network-enabled collaboration and

conferencing technologies running on convergent networks to encourage telecommuting and online classes. The latest high-definition video and sound technologies give attendees at virtual classrooms and training sessions the sense of actually being in the same room.

2. Competitive advantage in the educational industry once again relies on accessibility and portability. The concept of consolidation is the next phase in the evolution of network convergence. In most industries, there is an effort to consolidate voice, video, and data networks onto a single IP network to allow organizations to reduce the cost of communication and take advantage of under-used network capacity.

The education industry extends that concept beyond voice, video, and data services to allow for any IP-based service to utilize the network, wired or wireless, to extend cost reduction, improve utilization of under-used network capacity, and add flexibility to organizations through business process improvements. Competitive advantage will go to the schools that fully utilize every advantage that network convergence has to offer. Videoconferencing and real time document sharing can provide a competitive advantage over schools with traditional networks.